

## **Burton Mesa Management Area Fuel Break Sensitive Bird Survey**

Conducted by: Lyann A. Comrack, Associate Wildlife Biologist  
California Department of Fish and Game  
Date: May 24, 2004

### **Purpose:**

To conduct a field assessment of bird use of sections 3, 4; 8-12 of Burton Mesa scheduled for fuel reduction; to focus attention on sensitive bird species likely to be impacted by the fuel reduction activities; to make note of other vertebrate use of the area.

### **Approach:**

Surveyed the fuel reduction treatment areas as per direction from T. Stewart on May 19, 2004. Maps, notes, and supporting documents were delivered at that time. Surveys performed on May 20, 2004 from 0620- 1535. I conducted a field assessment of bird and mammal presence on fuel reduction sections 3, 4, 9-12, accompanied by the Department's herpetologist, Tim Hovey, and scientific aid Jenny O'Brien; I surveyed segment #8 alone.

Field conditions were as follows: air temperature about 58 ° F. warming to about 70 ° F; overcast skies clearing to partly cloudy; < 5 mph wind increasing to about 10+ mph. No tapes, traps or lures were used during the course of this survey.

### **Findings:**

Vertebrate species detected are presented in Table 1.

Four sensitive bird species were detected during field surveys. Yellow warbler (*Dendroica petechia*), Bell's sage sparrow (*Amphispiza belli belli*), and Cooper's hawk (*Accipiter cooperii*), all California Species of Special Concern, were observed on or near the treatment zones. Swainson's thrush (*Catharus ustulatus*), proposed for inclusion on the Department's revised Species of Special Concern list (in prep), was also detected. Details are as follows:

Singing male yellow warblers were observed and heard in the oak woodland of sections 4 and 8. Yellow warblers sing during migration; it is therefore difficult to determine the breeding status of these individuals based on one site visit. However, at least 50 nesting pairs of yellow warblers are known to nest locally at Vandenberg Air Force Base (Breininger 1988 in Odion et al. 1993). Therefore, it is prudent to assume the Burton Mesa birds are locally nesting individuals.

A single Swainson's thrush was heard calling from coastal sage scrub vegetation in section 8. Migrant Swainson's thrushes move through southern California as



late as mid-June (Garrett and Dunn 1981). The species is apparently fairly common nesting species in Santa Barbara County (Garrett and Dunn 1981). As the coastal subspecies of Swainson's thrush nests in riparian vegetation, it is not expected to be directly disturbed by vegetation clearing in the sections surveyed on this date.

A single male Cooper's hawk was flushed from the ground by Tim Hovey on section 4. This species is not known to nest at Burton Mesa. Typically, it requires taller trees for nesting which offer concealment and protection from disturbance than those found at Burton Mesa. Cooper's hawks are known to nest at Vandenberg Air Force Base (Breininger 1988 in Odion et al. 1993).

Bell's sage sparrow was detected in the Burton Mesa chaparral and coastal sage scrub near the south end of section 10. Two juveniles were seen and heard moving through the shrub zone off-site of the treatment area. Considered a migrant by Odion et al. (1993), the presence of juveniles in May suggests local nesting. The species nests on the ground under shrubs of various species and could therefore be impacted by the fuel reduction vegetation clearing.

Ample evidence of nesting by many bird species was documented (pairing, territorial singing, chases, aggressive behavior, alarm calls, nesting material carried by adults, food carried by adults, begging behavior by young, etc.). The treatment sections appear to support robust populations of chaparral and coastal sage scrub obligate bird species including wrentit (*Chamaea fasciata*), Bewick's wren (*Thryomanes bewickii*), California thrasher (*Toxostoma redivivum*), blue-gray gnatcatcher (*Polioptila caerulea*), spotted towhee (*Pipilo maculatus*), and California towhee (*Pipilo crissalis*).

### **Recommendations:**

1) Burton Mesa supports nesting bird species, including several considered sensitive, in all habitats. No fuel reduction activities should occur during the bird breeding season. The bird breeding season should be considered as spanning mid-February through August.

2) Brown-headed cowbirds (*Molothrus ater*), American crows (*Corvus brachyrhynchos*), and Western scrub jays (*Aphelocoma californica*) were detected during the survey. Crows, in particular, were very commonly encountered. Brown-headed cowbirds are nest parasites. That is, they lay eggs in the nests of other bird species. Corvids, including crows and jays, are efficient predators on eggs and nestlings of other bird species. Vegetation reduction in the treatment areas will create a so-called edge effect especially favorable to these predatory or parasitic species. Reductions to the breeding populations of prey species in the treatment segments and in adjacent untreated areas may result. Mitigation may include monitoring populations of corvids and cowbirds and developing a control strategy as necessary.



3) To minimize impacts to birds, hand crews should be used to remove vegetation at all sites.

4) Section 12 presently supports an infestation of pampas grass, a non-native and invasive species. Vegetation reduction should focus on the removal of this and other non-native and noxious weeds to achieve fuel modification goals.

#### References

Breining, D. 1988. Survey for Least Bell's Vireo in Riparian Habitat on Vandenberg Air Force Base, Santa Barbara County, CA. NASA Technical Memorandum 100984.

Garrett, K. and J. Dunn. 1981. Birds of Southern California Status and Distribution. Los Angeles Audubon Society, Los Angeles CA.

Odion, D., J. Storrer, and V Semonsen. 1993. Biological Resources Assessment Burton Mesa Project Area, Santa Barbara County. Prepared for Santa Barbara County Resource Management Department, Santa Barbara, CA.



## **Burton Mesa Management Area Fuel Break Amphibian and Reptile Survey**

Conducted by: Tim E. Hovey, Associate Fisheries Biologist  
California Department of Fish and Game  
Date: June 4<sup>th</sup>, 2004

### **Purpose:**

To conduct a field assessment for amphibians and reptiles in sections 3, 4; 8-12 of Burton Mesa scheduled for fuel reduction, to assess habitat for sensitive amphibians and reptiles and to determine presence through observational surveys.

### **Approach:**

Observational surveys were conducted on May 19<sup>th</sup>, 2004 of the above listed segments. Segment outlines, maps and area priorities were provide prior to the surveys by the LMMP supervisor, Terri Stewart. Herpetological surveys were conducted with the assistance of Lyann Comrack, Associate Wildlife Biologist and Jenny O'Brien, Scientific aide. Sensitive bird and herpetological surveys were done simultaneously in all segments except Segment 8.

During the surveys notes were made on species observed, habitat assessment and tracks encountered. Additional information was gathered on mammals encountered during the survey period.

### **Findings:**

Vertebrate species detected are presented in Table 1.

A single specimen of the California horned lizard (*Phrynosoma coronatum*) was observed on Segment 10 and the surrounding habitat would support this species. The California Department of Fish & Game considers the California horned lizard a species of special concern and the Bureau of Land Management lists it as sensitive.

All additional herpetological species (See Table 1) are not of a sensitive nature and with the exception of the California horned lizard the surrounding habitat likely would not support additional sensitive species.

To minimize the impacts to the California horned lizard, I would strongly recommend that fuel break activities occur outside the active period for this species, which is from March to late August. Additionally, I would recommend that hand crews be utilized to conduct fuel breaks to minimize impacts.



## **Burton Mesa Management Area Fuel Break Mammal Survey**

Conducted by: David Lawhead, Associate Wildlife Biologist  
California Department of Fish and Game  
Date: June 16, 2004

### **Purpose:**

To conduct a field assessment of mammals within designated fuel reductions zones on the Burton Mesa Management Area. Designated fuel management zones included Sections 2-8, 9, 10, 11, 12, So. Vandenberg Village West, So. Rucker Road, So. Mission Hills North, and So. Mesa Oaks. Assessment of potential impacts to mammals from future fuel reduction activities was the primary focus of the survey.

### **Approach:**

The presence of mammal species within fuel management zones was ascertained by walking the areas in question and recording mammal sightings, calls, tracks, scats, burrows, and other sign. In additions, 50 small mammal live-traps (Sherman box traps – 30 9” traps and 20 12” traps) were placed at two locations (25 traps each), Sections 2-8 and So. Rucker Road, to assess the rodent species present. It was known from previous visits to the sight that woodrat nests are present. To ascertain which species is present, an effort was made to place the small mammal traplines near woodrat nests when possible. No effort was made to assess bats during this survey effort. Also, incidental observations of birds, reptiles and amphibians were also recorded during the survey.

Field surveys were conducted on June 6-9, 2004. The times of observation are as follows: June 7 from 1600-1900; June 8 from 0730-1900, and June 9 from 0630-1300. The field conditions on the three survey days was similar with overcast skies in the morning hours gradually clearing to sunny conditions. Temperatures ranged from 55°F to 72°F, winds from 10-20 mph. On June 9 there was off and on drizzle in the morning hours.

### **Findings:**

Vertebrate species detected are presented in Table 1.

Two sensitive mammal species were detected during wildlife surveys of the Burton Mesa Management Area, badger (*Taxidea taxus*) and western gray squirrel (*Sciurus griseus*). The badger has been listed in the past by CDFG as a California Species of Special Concern, and the western gray squirrel is considered a species of local concern by Santa Barbara County due to reduction in populations.



Badger “diggings”, indicating foraging activity, was found at two fuel management locations, South Rucker Road, and South Mission Hills North. All excavations were relatively shallow indicating that badgers were attempting to excavate rodents. No denning burrows were found. Badgers are likely common on the Burton Mesa property, and forage over a wide area.

The western gray squirrel was detected by Tim Hovey during his survey of fuel management zones 3 and 8, in oak woodland habitat. This species is associated with oak woodland and the Bishop pine forest habitats on Burton Mesa. Despite the relative abundance of oak woodland within or immediately adjacent to the fuel management zones for the Burton Mesa Management Area, this species does not appear to be common within these zones. In three days of mammal surveys during June no gray squirrels were detected.

Previous reports had indicated that the desert woodrat (*Neotoma lepida*) was present on Burton Mesa. This species is considered regionally sensitive due to declining habitat and populations. Woodrat nests are common throughout the chaparral/oak woodland habitats within the fuel management zones, although the vast majority are associated with oak trees. The dusky-footed woodrat is another woodrat species found in many of the same habitats as the desert woodrat, and trapping is necessary to identify which species is present. The results of the small mammal trapping effort only confirmed that the dusky-footed woodrat is present. That does not exclude the possibility that the desert woodrat is also present, but it would require a more intensive trapping effort to confirm this.

Mule deer are relatively common within the fuel management zones on the Burton Mesa Management Area. One area of particular interest is fuel management zone segment 9. The level of deer activity on this area was significantly higher than that found on any other segment. Deer trails were extensive, scat piles were abundant, and even a shed antler was found. This segment is dominated by more open chaparral habitat, some of which appears to have been disturbed in the past for a water/sewer line. There were also a significant number of smaller deer scats suggesting that this area may be heavily used by fawns as well as adults. It's possible that this area is used by the local mule deer population for fawning.

On the South Rucker Road fuel management zone segment, just south of the church facilities, what appears to be a fox den was found. This multiple-burrow complex was located in a disturbed grassland/ruderal field. It could not be determined whether it was a gray fox or red fox den.

Overall, the Burton Mesa Management Area fuel management zones support a good diversity of mammal species. Having large undeveloped tracts of natural lands adjacent to the urban residential developments has ameliorated the severity of the urban edge effects to some degree, allowing for continued high mammal diversity in the fuel management zones.



One additional observation was made in the course of the mammal survey. A California horned lizard scat was found in the agricultural field within the South Mission Hills North fuel management segment. This observation is in addition to those described in the amphibian-reptile survey report by Tim Hovey.

### **Recommendations:**

It is not likely that fuel removal within the Burton Mesa Management Area fuel modification zones would significantly affect the badger. In fact, it may actually enhance badger foraging by opening up the habitat and encouraging the expansion of a favorite badger prey species, the California ground squirrel. If any denning burrows are found they should not be disturbed during the breeding season.

The western gray squirrel may be impacted by fuel removal, but if fuels removed are primarily shrubs, and not oak trees, then the results are likely not to be significant. If oak trees are removed, that would effectively eliminate squirrel habitat. Where it is possible, oak trees should not be removed for fuel management.

Because woodrat nests are a ready source of combustible fuel, fuel management is likely to have a significant impact upon the woodrat populations occupying the management zones. While woodrat nests are typically found at the base of oak trees, the woodrats forage in the chaparral and sage scrub as well. Removal of the shrubs would reduce and/or eliminate woodrat habitat. Because of the abundance of oak woodland and chaparral habitats on the Burton Mesa Management Area, it is not expected that fuel modification would have a significant impact upon the woodrat population of the Management Area. If it could be confirmed that the desert woodrat was present, the impacts might be considered significant.

It is recommended that significant vegetation clearing be avoided in Segment 9 if possible. Mule deer use here is extensive, and it may be important for fawning. At a minimum, no clearing should be conducted during the breeding season.



Table 1. Burton Mesa Vertebrate Species List for Fuel Management Zones

<b>MAMMALS</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>Fuel Management Zone #s/ Comments**</b>
Brush Rabbit	<i>Sylvilagus bachmani</i>	8
Audubon's Cottontail	<i>Sylvilagus audubonii</i>	8
Rabbit	<i>Sylvilagus sp.</i>	2-8, 10, 11, SRR, SMO, SMH
Western Gray Squirrel*	<i>Sciurus griseus</i>	3,8
California Ground Squirrel	<i>Spermophilus beecheyi</i>	2-8, SRR, SVDB
Botta's Pocket Gopher	<i>Thomomys botta</i>	2-8, 11, SRR, SMH, SVDB
California Pocket Mouse	<i>Chaetodipus californicus</i>	SRR
Pacific Kangaroo Rat	<i>Dipodomys agilis</i>	2-8, SRR
Heermann's Kangaroo Rat	<i>Dipodomys heermanni</i>	SRR
Dusky-footed Woodrat	<i>Neotoma fuscipes</i>	2-8
Woodrat sp.	<i>Neotoma sp.</i>	2-8, 10, 11, 12, SRR, SMO, SMH
Deer Mouse	<i>Peromyscus maniculatus</i>	SRR, 2-8
California Mouse	<i>Peromyscus californicus</i>	2-8
Bobcat	<i>Lynx rufus</i>	2-8,9,10, SRR, SMO, SMH
Coyote	<i>Canis latrans</i>	Scat, tracks throughout
Domestic Dog	<i>Canis familiaris</i>	2-8, 10, 11, SRR, SMO, SVDB
Gray Fox	<i>Urocyon cinereoargenteus</i>	8,9,10, SRR, SVDB
Badger	<i>Taxidea taxus</i>	SMH, SRR, in vic. of 10
Striped Skunk	<i>Mephitis mephitis</i>	SMH, SVDB
Mule Deer	<i>Odocoileus hemionus</i>	2-8, 9, SMO, SVDB
<b>BIRDS</b>		
Great Blue Heron	<i>Ardea herodias</i>	8 (fly-over)
Turkey Vulture	<i>Cathartes aura</i>	4 (fly-over), 9, SMO, SMH, SVDB
Mallard	<i>Anas platyrhynchos</i>	8 (fly-over)
<b>Cooper's Hawk</b>	<i>Accipiter cooperii</i>	4 (one male)
Red-shouldered Hawk	<i>Buteo lineatus</i>	8,9, SVDB
Red-tailed Hawk	<i>Buteo jamaicensis</i>	4,9
California Quail	<i>Callipepla californica</i>	8,10,11, SMO, SMH
Mourning Dove	<i>Zenaidura macroura</i>	4,8,9,10,11, SRR, SMO, SMH
Great-horned Owl	<i>Bubo virginianus</i>	10 (one flushed from day roost)
Anna's Hummingbird	<i>Calypte anna</i>	3,4,8,9,10, SRR
Northern Flicker	<i>Colaptes auratus</i>	8,10,11, SRR
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	10
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	10
Black Phoebe	<i>Sayornis nigricans</i>	8,10, SRR, SMH
European Starling	<i>Sturnus vulgaris</i>	3,4,10,11
Hutton's Vireo	<i>Vireo huttoni</i>	4,10
Western Scrub Jay	<i>Aphelocoma californica</i>	8,10,11, SRR, SVDB





Common Raven	<i>Corvus corax</i>	2-8
American Crow	<i>Corvus brachyrhynchos</i>	3,4,8,9,10,11,12, SRR, SMO, SMH, SVDB
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	9 (fly-over), SVDB
Oak Titmouse	<i>Baeolophus inornatus</i>	3,4,8,9,10,11
Bushtit	<i>Psaltiriparus minimus</i>	3,4,8,9,10,11, SRR, SMO, SMH, SVDB
House Wren	<i>Troglodytes aedon</i>	10
Bewick's Wren	<i>Thryomanes bewickii</i>	3,8,9,10,11, SMH
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	4,8,9,10, 11, SRR, SMO, SVDB
<b>Swainson's Thrush</b>	<i>Catharus ustulatus</i>	8
Western Bluebird	<i>Sialia mexicana</i>	4
American Robin	<i>Turdus migratorius</i>	8
Wrentit	<i>Chamaea fasciata</i>	3,4,8,9,10,11,12, SRR, SMO, SMH
Northern Mockingbird	<i>Mimus polyglottos</i>	Urban interface for all segments
California Thrasher	<i>Toxostoma redivivum</i>	3,8,9,10,11, SMH
Cedar Waxwing	<i>Bombycilla cedrorum</i>	4,8,10
Orange-crowned Warbler	<i>Vermivora celata</i>	10
<b>Yellow Warbler</b>	<i>Dendroica coronata</i>	4,8
Townsend's Warbler	<i>Dendroica townsendi</i>	10
Common Yellowthroat	<i>Dendroica occidentalis</i>	10, SVDB
Spotted Towhee	<i>Pipilo maculatus</i>	3,4,8,9,10,11,12, SRR, SMO, SMH, SVDB
California Towhee	<i>Pipilo crissalis</i>	8,9,10,11, SMO, SVDB
<b>Bell's Sage Sparrow</b>	<i>Amphispiza belli belli</i>	10 (2 juv. seen)
Song Sparrow	<i>Melospiza melodia</i>	10,11
Dark-eyed Junco	<i>Junco hyemalis</i>	3,4,8,10,11
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	SVDB
Brown-headed Cowbird	<i>Molothrus ater</i>	4,10
Purple Finch	<i>Carpodacus purpureus</i>	4,10
House Finch	<i>Carpodacus mexicanus</i>	3,4,8,9,10,11, SRR, SMH, SVDB
Lesser Goldfinch	<i>Carduelis psaltria</i>	4,8,9,10,11

REPTILES		
Side-blotch Lizard	<i>Uta stansburiana</i>	All
Western Fence Lizard	<i>Sceloporus occidentalis</i>	All
Coast Whiptail	<i>Cnemidophorus tigris</i>	All
Coast Horned Lizard	<i>Phrynosoma coronatum</i>	10, SMH
Common Kingsnake	<i>Lampropeltis getulus</i>	11
Western Yellow-bellied Racer	<i>Coluber constrictor</i>	12

\* = species of local concern

Bold face = California Species of Special Concern

Date of survey 1: 20 May 2004

Time: 0620-1535

Personnel: Lyann Comrack, Tim Hovey, Jenny O'Brien

Weather: 100% overcast in AM, pty cloudy PM, 58 F warming to 70 F; <5 mph wind in AM to 10+ mph in PM



Date of survey 2: 7-9 June 2004

Times: 1600-1900 (June 7); 0730-1900 (June 8); 0630-1300 (June 9)

Personnel: David Lawhead

Weather: 100% overcast in AM (drizzle on June 9), partly cloudy to clear in PM, 55 F to 72 F, strong winds in the PM (10-25 mph)

\*\*SRR – South Rucker Road, SMO – South Mesa Oaks, SMH – South Mission Hills, SVDB – South Vandenberg Village West

Additional Wildlife Sightings: ask mary meyer

Western Gray Squirrel: Observed in far west end of Segment 2, Sept. 10, 2004

Western Gray Squirrel: Observed in riparian area of Segment 1, October 14, 2004

Coast Horned Lizard: Adult observed in North Mission Hills Fuelbreak Segment...far west end, on open sand on an old trail inside otherwise old growth manzanita/oak dominated Burton Mesa Chaparral...seen on 5/17/04, very near:

34 degrees 42'03.9"; 120 degrees 26.03.0" Nad 27...(location of adjacent RAPID assessment)

